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Docket No. UV/168

Applicant : Michael D. Ellis

For : INTERACTIVE TELEVISION TARGETED MESSAGE SYSTEM

EXPRESS MAIL CERTIFICATION

"Express Mail" mailing label number EK709292027US.

Date of Deposit November 21, 2000.

I hereby certify that this transmittal letter and the other papers and fees identified in this transmittal letter as being transmitted herewith are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and are addressed to the Hon. Commissioner for Patents, Washington, D.C. 20231.

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Commissioner for Patents
Washington, D.C. 20231

New York, New York
November 21, 2000

TRANSMITTAL LETTER FOR
ORIGINAL PATENT APPLICATION

Sir:

Transmitted herewith for filing are the [X] specification; [X] claims; [X] abstract; [X] declaration and [X] power of attorney, for the above-identified patent application.

Also transmitted herewith are:

[X] 14 sheets of:

[ ] Formal drawings.

[X] Informal drawings. Formal drawings will be filed during the pendency of this application.

[ ] Certified copy(ies) of application(s)

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from which priority is claimed.

[X] An assignment of the invention to United Video Properties, Inc.

[X] A check in the amount of $40.00 to cover the recording fee.

[ ] Please charge $40.00 to Deposit Account No. 06-1075 in payment of the recording fee. A duplicate copy of this transmittal letter is transmitted herewith.

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The filing fee has been calculated as shown below:

FOR	NUMBER FILED	NUMBER EXTRA	RATE	FEE
BASIC FEE				$710.00
TOTAL CLAIMS	32	- 20 = 12	X $ 18 =	$216.00
INDEPENDENT CLAIMS	2	- 3 = 0	X $ 80 =	$ 0.00
[ ] MULTIPLE DEPENDENT CLAIMS			+ $270 =	$ 0.00
			TOTAL	$926.00

[X] A check in the amount of $926.00 in payment of the filing fee is transmitted herewith.

[ ] This application is being filed unaccompanied by a filing fee. The appropriate filing fee will be paid in response to a Notice to File Missing Parts, pursuant to 37 C.F.R. § 1.53(f).

[X] The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 C.F.R. § 1.16, in connection with the paper(s) transmitted herewith, or credit any overpayment of same, to deposit Account No. 06-1075. A duplicate copy of this transmittal letter is transmitted herewith.

[ ] Amend the specification by inserting before the first line the sentence: -- This is a [ ] continuation-in-part, of application Serial No.: _____, filed _____ entitled _____.

[ ] Please charge $_____ to Deposit Account No. 06-1075 in payment of the filing fee. A duplicate copy of this transmittal letter is transmitted herewith.

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INTERACTIVE TELEVISION TARGETED MESSAGE SYSTEM

This application claims the benefit of U.S. provisional patent application No. 60/167,184, filed November 23, 1999.

Background of the Invention

This invention relates to distributing and using electronic messages in an interactive television environment.

Interactive television applications such as program guides are well known. Such guides, which are typically implemented on set-top boxes, allow users to view television program listings on their home televisions. Typical program guides allow users to view information for television programs and channels and audio programs and channels. For example, a program guide may provide information on regular television channels, premium television channels, pay-per-view television channels, and music channels. A variety of display formats are typically supported. For example, program listings may be organized by time, by channel, and by category (sports, children, comedy, movies, etc.).

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Other interactive television applications include e-mail readers, web browsers, video-on-demand applications, home banking applications, home shopping applications, etc.

Program guides typically receive program schedule data from a central source. Various data distribution schemes may be used. In one suitable distribution scheme, a global set of program schedule data is transmitted nationwide to numerous cable systems. Each cable system typically has a different channel lineup.

As a result, the global set of program schedule data that is provided by the central source includes data for all cable systems. The global program schedule data may be filtered so that only an appropriate subset of the data is delivered to each subscriber.

The central program guide data source may distribute messages to all subscribers in a particular cable system. Cable operators may also communicate with their subscribers using messages. For example, a cable operator may send a message to a subscriber who has not paid their last bill.

It has not been possible, however, to use existing systems to deliver messages to particular subscribers that are targeted based on criteria such as subscriber-defined program guide settings or the channels to which the subscriber has subscribed.

It is therefore an object of the present invention to provide targeted messaging systems for television service subscribers in a cable television

system, satellite television system, broadcast television system, or the like.

Summary of the Invention

In accordance with the present invention, an interactive television system is provided. Television programming is delivered to users with equipment such as television equipment based on set-top boxes or the like or computer equipment. The system provides targeted messages to the users at such user equipment.

Interactive television applications such as program guides, interactive messaging applications (e.g., e-mail readers), web browsers, and other such applications may be implemented using the user equipment. Applications may be run locally (e.g., on a set-top box or personal computer) or may use a client-server architecture (e.g., an arrangement in which a set-top box or other platform acts as a client processor and generates requests for data from a server processor such as a server computer located at a cable system headend or a server computer located on the Internet).

Program guides based on set-top box systems may be provided that display television, messages, menu options, and various program guide display screens on a monitor (e.g., a television) that is connected to the set-top box.

Messages, which may be e-mail or other subscriber messages, may be targeted to a user based on which television programming and other services are available in the user's home. For example, an interactive television application provider or other

service provider may send a message to all users (e.g., all program guide users) who have or who do not have a specific channel in their local lineup or who have or who have not subscribed to a particular channel or other service. Messages may also be sent to all users who have or who have not set a reminder for a specific program or other content, who have or who have not scheduled a specific program or other content for recording, or who have or who have not selected a specific program, channel, or other content as a favorite. If desired, messages may be sent to all users who have or who have not ordered specific products or services, (e.g., a specific pay-per-view (PPV) program, a specific package of pay-per-view programs, video-on-demand, a specific product, etc.). Messages may be targeted based on parental control settings. Any suitable combination of these criteria or other suitable criteria may be used.

As an example, a message may be targeted to those users who have or who have not subscribed to or ordered a particular set of channels or any channel in a set of channels.

The messages may be used by a program guide or other application to send programming-related messages such as last minute schedule changes to only those users who might be interested. Users who do not subscribe to the affected service need not be notified of such changes.

If desired, messages may be distributed by a cable provider or programmer (to a program guide or independent of any program guide) to target messages to users who are interested in a particular program or who

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do not have access to certain programming and hence might be potential customers.

Messages may be distributed to user television equipment and user computer equipment from a computer at a main facility such as a program guide data source facility. Messages may be distributed through a plurality of television distribution facilities (e.g., cable system headends or the like). Messages may also be distributed to set-top boxes from equipment at the television distribution facilities.

Messages may be provided with targeting criteria. For example, messages may be tagged with a unique identifier (ID) or a list of unique IDs associated with the referenced program(s) or channel(s). As an example, to target a message only to Home Box Office (HBO) subscribers, the message may be prefaced with a code indicating that a channel source ID will follow, and that only users authorized for that source ID should receive that message.

The message may be automatically accepted or discarded by the user's message receipt/display application. That application may be an e-mail application, may be part of a program guide, or may be part of any other suitable application.

The application may be implemented using user equipment in the home such as a set-top box, or it may be client-server based, with only the client application in the home.

Further features of the invention, its nature and various advantages, will be more apparent from the accompanying drawings and the following detailed description of the preferred embodiments.

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Brief Description of the Drawings

FIG. 1 is a schematic diagram of an illustrative interactive television system in accordance with the present invention.

FIG. 2 is a schematic diagram of illustrative user television equipment in accordance with the present invention.

FIG. 3 is schematic diagram of additional illustrative user television equipment in accordance with the present invention.

FIG. 4 is a schematic diagram of illustrative user computer equipment in accordance with the present invention.

FIG. 5 is a schematic diagram of illustrative user equipment in accordance with the present invention.

FIG. 6 is a flow chart of illustrative steps involved in providing targeted messages to users in accordance with the present invention.

FIG. 7 is a diagram showing how messages may have associated targeting criteria in accordance with the present invention.

FIG. 8 is a flow chart of illustrative steps involved in providing targeted messages to users based on which reminders have been set in accordance with the present invention.

FIG. 9 is a flow chart of illustrative steps involved in providing targeted messages to users based on which services the user subscribes to in accordance with the present invention.

FIG. 10 is a flow chart of illustrative steps involved in providing targeted messages to users based

on which favorites settings the user has established in accordance with the present invention.

FIG. 11 is a flow chart of illustrative steps involved in providing targeted messages to users based on which parental control settings the user has established in accordance with the present invention.

FIG. 12 is a flow chart of illustrative steps involved in providing targeted messages to users based on which content the user has selected for recording in accordance with the present invention.

FIG. 13 is a flow chart of illustrative steps involved in providing targeted messages to users based on which products and services the user has ordered in accordance with the present invention.

FIG. 14 is a flow chart of illustrative steps involved in providing targeted messages to users based on settings from a television service provider in accordance with the present invention.

Detailed Description of the Preferred Embodiments

An illustrative interactive television system 10 is shown in FIG. 1. A user at user equipment 12 may receive television programming and other services from television distribution facility 14 over communications path 16. Television distribution facility 14 may be a satellite television facility, a cable system headend, a broadcast facility, or any other suitable facility for distributing television programming to the user. Communications path 16 may be a satellite link, a broadcast link, a cable link, a fiber-optic link, a combination of such links, or any other suitable link. There may be numerous television distribution

facilities, but only one such facility is shown in FIG. 1 to avoid overcomplicating the drawings.

Television programming may be provided over path 16 using any suitable approach. For example, television programming may be provided as analog television signals, as digital streams, or as a combination of analog signals and digital streams.

An interactive television program guide may be implemented using user equipment 12. For example, an interactive television program guide may be implemented on user equipment 12. If desired, the interactive television program guide may be implemented using a client-server or distributed architecture in which user equipment 12 acts as the client processor and servers or other computing equipment such as server 18 act as one or more server processors.

Program guide data for the program guide application (e.g., program listings, program descriptions, etc.) may be provided to the program guide for storage in a program guide database. Such a database may be maintained on a server such as server 18 or on user equipment 12 or any other suitable location. Program guide data and other data used by the program guide may be distributed using any suitable data distribution technique. For example, if the program guide application is implemented using user equipment 12, program guide data may be distributed to user equipment 12 in the television vertical blanking interval, on a sideband, using a separate data path from the televison signal or a separable data stream, etc. Computer 19, server 18, and server 28 preferably

include a processor to handle information distribution tasks.

User equipment 12 preferably includes a processor to handle tasks associated with implementing a program guide application. User equipment 12 may connect to the Internet or other suitable communications network 24 via path 16, television distribution facility 14, and path 26. Path 26 may be any suitable communications path, such as a cable link, a satellite link, a fiber-optic link, telephone link, wireless link, or any other such path or combination of such paths.

User equipment 12 may also connect to communications network 24 over link 27, which may be any suitable communications path, such as a cable link, a satellite link, a fiber-optic link, or any other such path or combination of such paths.

Regardless of how user equipment 12 connects to communications network 24, user equipment 12 may receive content from computers such as server 18, server 28, and computer 19. For example, user equipment 12 may support a web browser that allows the user to view web pages or the like or an e-mail or other messaging application that allows the user to receive messages. If desired, the user may view web pages that are stored on server 18 using a web browser.

Applications other than web browser applications and e-mail applications may also be used to obtain content and access services from computers such as server 18, server 28, and computer 19. Suitable applications include interactive program guide applications, home shopping applications, home banking

applications, video-on-demand applications, etc. E-mail applications and web browser capabilities may be incorporated into such applications and program guide applications if desired. A common navigation shell may be used to provide access to the applications if desired.

Servers such as servers 18 and 28 may be associated with Internet service providers, program guide providers, application providers, cable system operators, broadcast or satellite television operators, etc. Computer 19 may be associated with an interactive television application provider.

If desired, program schedule information may be provided to user equipment 12 from computer 19 of program guide data source 20 using communications path 30, communications network 24, and communications path 27. Communications path 30 may be any suitable communications path, such as a wired link, a satellite link, a fiber-optic link, or any other such path or combination of such paths.

Users may use various types of user equipment to receive television programming from television distribution facility 14 and to receive messages and access services such as interactive television program guides and non-program-guide applications. For example, user equipment may be based on user television equipment such as a set-top box and a television. User equipment may also be based on a personal computer. If desired, user equipment arrangements may be based on personal computer televisions (PC/TVs) and WebTV boxes.

Illustrative user television equipment 32 is shown in FIG. 2. Each set-top box 34 preferably

contains a processor to handle tasks associated with implementing a program guide application on set-top box 34. Set-top box 34 is typically connected to a television 38 or other display device. Set-top box 34 may receive television programming and data at line or input 35. Set-top box 34 may have analog and digital television tuning circuitry for handling analog and digital television signals. Television signals may be passed to videocassette recorder 36 or any other suitable recording device for recording. Set-top box 34 may also control the operation of videocassette recorder 36. For example, set-top box 34 may issue infrared commands that are received by videocassette recorder 36 at the same inputs at which standard remote control commands are received.

Videocassette recorder 36 may be connected to television 38. Television programming and graphic display screens generated by applications implemented using set-top box 34 may be passed from set-top box 34 to television 38 through videocassette recorder 36. If desired, videocassette recorder 36 may be omitted.

Set-top box 34 has memory and processing circuitry. This allows set-top box 34 to be used to implement applications that support an interactive television program guide, web browsing and Internet access, e-mail and other messaging services, and other services such as home shopping, home banking, and video-on-demand services, etc.

A remote control 40 such as an infrared remote control may be used to control set-top box 34, videocassette recorder 36, and television 38. Remote control 40 may have buttons 42 such as a power button,

right, left, up, and down arrow keys, an OK or select key, a favorites or fav key, a lock or parental control key, a record key, etc.

Illustrative user television equipment 44 based on a digital video recorder 46 is shown in FIG. 3. Digital video recorder 46 may receive television programming and may access interactive services using line or input 48. Digital video recorder 46 may have analog and digital tuning circuitry to receive and process television signals. Digital video recorder 46 may be used to record television programs in any suitable format. For example, digital videos may be stored using the MPEG-2 format.

Recorded videos or real-time videos from input 48 may be displayed on television 50 or any other suitable monitor. A remote control 52 such as an infrared remote control may be used to control digital video recorder 46 and television 50. Remote control 52 may have buttons such as a power button, right, left, up, and down arrow keys, an OK or select key, a favorites or fav key, a lock or parental control key, a record key, etc.

Digital video recorder 46 has memory and processing circuitry that allows digital video recorder 46 to be used to implement applications that support an interactive television program guide, web browsing and Internet access, e-mail and other messaging services, and other services such as home shopping, home banking, and video-on-demand services, etc. Television programming and display screens generated by interactive applications may be displayed on television 50.

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Illustrative user computer equipment 54 is shown in FIG. 4. User computer equipment 54 may be based on a personal computer 56 or any other suitable computing device. A personal computer with television capabilities will hereinafter be referred to as personal computer 56. Each personal computer 56 preferably contains a processor to handle tasks associated with implementing a program guide application on personal computer 56. Personal computer 56 is typically connected to a monitor 62 or other display device. Personal computer 56 may receive television programing and information for interactive services using line or input 58. Personal computer 56 may contain a tuner card or other suitable circuitry for handling analog and digital television signals. Personal computer 56 may also contain memory and processing circuitry that allows personal computer 56 to be used to implement applications that support an interactive television program guide, web browsing and Internet access, e-mail and other messaging services, and other services such as home shopping, home banking, and video-on-demand services, etc.

Television signals and screens generated by interactive applications may be displayed on monitor 62.

The user may interact with personal computer 56 using any suitable user input interface, such as keyboard 62, a pointing device such as a trackball, mouse, or touch pad, a voice recognition system, a handwriting recognition system, etc. If desired, the user may interact with personal computer 56 using a wireless remote control such as remote control 64.

Remote control 64 may be, for example, an infrared remote control.

User equipment 12 such as user television equipment 32 or 44 of FIGS. 2 and 3 and user computer equipment 54 of FIG. 4 may communicate with communications network 24 and television distribution facility 14 and other facilities using telephone modems, cable modems, digital subscriber line (DSL) modems, integrated digital services network (ISDN) modems, wireless communications circuitry, or any other suitable communications circuitry.

A generalized schematic diagram of user equipment 12 of FIG. 1 is shown in FIG. 5. Control circuitry 66 and memory and storage 70 may have communications and memory and processing circuitry for supporting functions such as receiving television programming and e-mail and other messages and accessing interactive services over line 68. Line 68 may connect to communications paths such as paths 16 and 27 of FIG. 1. Videos may be stored in storage 70. Television programming and text, graphics, and video associated with interactive services may be presented to the user with display 72. Display 72 may be a television, a computer monitor, or any other suitable display equipment.

The user may interact with control circuitry 66 using any suitable user input interface 74, such as a remote control, a keyboard, a wireless keyboard, a display remote, a handheld computer, a mouse, a trackball, a touch pad, or any other suitable input device.

Program listings information may be provided to the user with user equipment 12. For example, an interactive television program guide that is implemented using user equipment 12 may be used to display various screens of program listings organized by time, by television channel, by time and channel (e.g., in the form of a grid or the like), etc.

Program guide data sources such as program guide data source 20 may distribute television program listings to multiple television distribution facilities. Only one such television distribution facility 14 is shown in FIG. 1 to avoid overcomplicating the drawings. Each television distribution facility may have a different channel lineup. Moreover, each user associated with a given television distribution facility may subscribe to different channels. Users may also set various settings in program guides or other applications.

If desired, the information on which services the user subscribes to, the reminders that the user has set, information on the favorites settings of the user, information on the user's parental control settings, information on which content the user has set for recording, information on which products and services (e.g., pay-per-view programs) the user has ordered, and other such information may be stored in user equipment 12. In another suitable approach, the information may be stored on a remote computer such as server 18, server 28, or computer 19. Servers such as server 18 are associated with the television distribution facility from which the user receives television programming. If a program guide or other interactive

television application is implemented using a client-server arrangement involving user equipment 12 and server 18, the information may be stored at server 18 by a client-server application. If server 28 supports an on-line program guide, the information may be stored at server 28 by the on-line program guide. Any other suitable approach or a combination of such approaches may also be used.

The interactive television application provider or television service provider such as a cable system operator at television distribution facility 14 may send targeted messages to users at user equipment 12. The interactive television application provider may be a program guide provider at program guide data source 12, or any other suitable service provider (e.g., an e-mail service provider, a shopping service provider). The targeted messages may be based on the services to which the user subscribes, may be based on which products and services the user orders, may be based on which settings the user has established in the program guide or other application, or may be based on any other suitable criteria.

Some of the settings that the user may establish in an interactive program guide include settings related to parental controls (e.g., whether certain channels or programs have been locked), favorites or preferences (e.g., whether the user has informed the program guide of the user's preferences in certain channels, programs, categories of programming, etc.), recording (e.g., whether certain programs have been selected for automatic recording by the program guide), and reminders (e.g., whether the user has

directed the program guide to remind the user when a particular television program is about to begin). These are merely illustrative examples. The user may establish any suitable settings using an interactive television program guide. Moreover, the user may establish settings using other interactive television applications such as e-mail applications, home banking applications, video-on-demand applications, etc.

The filtering process that occurs when comparing the targeting criteria with each user's information may be performed at user equipment 12 or may be performed at any other suitable location within the message distribution path. For example, messages may be filtered at television distribution facilities such as television distribution facility 14, etc.

Any of these settings or other such information may be used as criteria for distributing targeted messages to users. Illustrative steps involved in distributing targeted messages to users are shown in FIG. 6. At step 76, the program guide provider, television service provider, or any other service provider may be provided with an opportunity to create targeted messages. For example, a message creation tool implemented on computer 19, server 18, or server 28 may be used to create messages. Messages may promote services, may provide last-minute schedule changes, etc. Messages may be created automatically by the message creation tool and targeted toward various classes of users. If desired, messages may be created with input from personnel at the program guide provider or television service provider.

At step 78, the messages are distributed to users. For example, messages may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 80, the user equipment 12 may be used to compare stored user information with criteria that are associated with the message. If the criteria are satisfied, the messages may be presented to the user at step 81. The message may be presented in the form of a message delivered to the user's e-mail in-box, as a pop-up overlay on top of the content being displayed on user equipment 12, or using any other suitable technique.

In comparing the targeting criteria to the stored user information at step 80, boolean logic terms (e.g., NOT, AND, OR, etc.) may be used. For example, a message may be targeted to all users who subscribe to (HBO or TBS) but NOT (SHO or TMC). Ranges may also be used. For example, a message may be targeted to all users who have set reminders for programs scheduled to start after 7:00 PM. Multiple criteria may need to be satisfied. For example, messages may be targeted to all users who have HBO AND who have SHO set as a favorite.

An example of a targeted message is shown in FIG. 7. Message 82 may contain a message body 84, which may contain text, graphics, audio, or video. Message 82 may also contain message targeting criteria 86. Message 82 is distributed to user equipment 12 where targeting criteria 86 are compared with data such as program guide data. Program guide data may include reminder list 88.

In the example of FIG. 7, message 82 has been provided with targeting criteria based on reminders. In particular, the criteria R(7:00, 13) specifies that the reminder is directed toward users who have a reminder set for channel 13 at 7:00. If desired, the channel number may be a source identifier (ID) that uniquely specifies which the television service of interest. Such a source ID may be used in program guide data source 20 to globally identify different sources of programming.

Regardless of how the channel information is specified, the information may be compared with the information in the user's reminder list 88. This allows the program guide, e-mail reader, or other suitable application at user equipment 12 to determine whether the user has set a reminder for the designated time and channel. In the example of FIG. 7, the targeted message may be presented to the user, because the user has set a reminder (reminder No. 1) for 7:00 on channel 13.

Illustrative steps involved in providing messages to users based on reminders settings are shown in FIG. 8. At step 90, the user may be provided with an opportunity to set a reminder. Such reminders may

include a reminder for a television program, a web reminder for a web cast, a web reminder for a chat session, a banking reminder, or any other suitable reminder. For example, a program listings grid may be displayed on user equipment 12 that contains program listings for various channels and times. The user may scroll through the program listings to locate a future program of interest using a highlight region or the like. When the user has highlighted a program of interest, the user may press an OK key on a remote control. This directs the program guide to provide the user with on-screen options that allow the user to set a reminder. Information on which reminders have been set by the user may be stored in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof.

At step 92, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message may be created that promotes a new television program that is expected to be popular to users who enjoy program Z. The message may be targeted to users who have set reminders for program Z. As another example, a message may be created that includes information on a last-minute schedule change for program Z. The message may be targeted to users who have set reminders for program Z.

At step 94, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and

path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 96, the program guide or other suitable interactive television application or the like may compare the targeting criteria from message 82 with stored user information by the interactive television application or other application in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information in the user's reminder list 88 or other such file or data structure stored by the interactive television program guide or any other suitable application. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 98.

Illustrative steps involved in providing messages to users based on particular services to which the user subscribes are shown in FIG. 9. Such services may include television channels, shopping web sites, etc. At step 100, the user may be provided with an opportunity to subscribe to certain services. For example, a cable operator or other television service provider may provide on-screen options that allow the user to order television services (e.g., premium television channels or packages of premium television channels) through a program guide implemented on user

equipment 12. Television services may also be ordered on-line or over the telephone. Information on which services have been subscribed to may be stored on user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof.

At step 102, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message promoting channel X may be created for all subscribers of channel Y who do not subscribe to channel X.

At step 104, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 106, the program guide or other suitable interactive television application or the like may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12., server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information that indicates which

television channels the user subscribes to. This type of information may, if desired, be maintained by the program guide, by the television service provider, or any other suitable provider. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 108.

Illustrative steps involved in providing messages to users based on favorite channel settings, favorite program settings, favorite web sites, and other favorites settings are shown in FIG. 10. At step 110, the user may be provided with an opportunity to set favorites. For example, the interactive television program guide may provide the user with on-screen lists of programs and channels. If the user highlights a desired channel or program and presses a remote control "favorites" key, the program guide will set that channel or program as a favorite. The user may also respond to on-screen prompts such as "set this program as a favorite?" or the like. If desired, preferences or favorites may be established for certain genres or categories of programming. Information on the user's favorites settings may be stored on user equipment 12 (e.g., by the program guide), server 18, server 28, computer 19, any other suitable device, or a combination thereof.

At step 112, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message promoting channel X may be created for all subscribers who have set channel

Y as a favorite, but have not set channel X as a favorite.

At step 114, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 116, the program guide or other suitable interactive television application or the like may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information that indicates which favorites settings the user has made in the interactive television program guide or other application that supports favorites. This type of information may, if desired, be maintained by the program guide. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 118.

Illustrative steps involved in providing messages to users based on parental control settings are shown in FIG. 11. At step 120, the user may be provided with an opportunity to set parental controls.

For example, the interactive television program guide may provide the user with on-screen lists of programs and channels. If the user highlights a desired channel or program and presses a remote control "lock" key, the program guide will lock that channel or program. A subsequent viewer must provide the correct personal identification number (PIN) to unlock the locked programming. Programs may also be locked by responding to on-screen options. Such options may be provided, for example, by a program guide when the user requests additional information using a remote control "info" key. If desired, genres of programming may be locked or programming may be locked based on parental guidance ratings (e.g., TV-Y, TV-G, TV-MA, R, NC-17, etc.). As another example, shopping web sites, genres of web sites, or any other web site or other type of content may also be locked. Information on the user's parental control settings (e.g., which programs, channels, genres of programming, ratings, etc. have been locked) may be stored on user equipment 12 (e.g., by the program guide), server 18, server 28, computer 19, any other suitable device, or a combination thereof.

At step 122, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message promoting channel X or promoting a pay-per-view program may be created for all subscribers who have not blocked programming with a TV-MA or R rating.

At step 124, the message may be distributed to users. For example, the message may be sent to

users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 126, the program guide or other suitable interactive television application or the like may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information on the parental control settings that the user has established using an interactive program guide or other interactive television application. This type of information may, if desired, be maintained by the program guide. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 128.

Illustrative steps involved in providing messages to users based on which content the user has selected for recording are shown in FIG. 12. Content may include television programs, web casts, chat sessions, or any other suitable content. At step 130, the user may be provided with an opportunity to set certain content to be recorded. For example, the interactive television program guide may provide the

user with on-screen lists of programs and channels. If the user highlights a desired channel or program and presses a remote control "record" key, the program guide may set a timed recording for that program. At the designated time, the program guide may record the selected program using videocassette recorder 36 (FIG. 2), digital video recorder 46 (FIG. 3), storage in personal computer 56 (FIG. 4), memory and storage 70 (FIG. 5), or other suitable user equipment 12. If desired, programs may also be recorded using remote equipment such as server 18, server 28, or computer 19. Programs may also be recorded by responding to on-screen options. Such options may be provided, for example, by a program guide when the user requests additional information for a program using a remote control "info" key. Information on the user's recording settings (e.g., which programs have been set for recording) may be stored on user equipment 12 (e.g., by the program guide), server 18, server 28, computer 19, any other suitable device, or a combination thereof.

At step 132, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message promoting program X may be created for all subscribers who have set program Y to be recorded.

At step 134, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24,

and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 136, the program guide or other suitable interactive television application or the like may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information on the recording settings that the user has established using an interactive program guide or other interactive television application. This type of information may, if desired, be maintained by the program guide. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 138.

Illustrative steps involved in providing messages to users based on which products and services the user has ordered are shown in FIG. 13. Products and services may include pay-per-view events, program packages (e.g., all football games on pay-per-view), merchandise (e.g., clothing), etc. At step 140, the user may be provided with an opportunity to order products or services. For example, the interactive television program guide may provide the user with on-screen lists of programs and channels. If the user

highlights a desired pay-per-view program and presses a remote control "OK" key, the program guide may provide on-screen options that allow the user to order the pay-per-view program. Information on which pay-per-view programs the user has ordered may be stored on user equipment 12 (e.g., by the program guide), server 18, server 28, computer 19, any other suitable device, or a combination thereof. When the user desires to order any products and services, the system may direct the request via communications network 24 (e.g., the Internet) or any other suitable communications path to an appropriate vendor.

At step 142, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message promoting pay-per-view program X may be created for all subscribers who have ordered pay-per-view program Y.

At step 144, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 146, the program guide or other suitable interactive television application or the like

may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12 (e.g., by the program guide), server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with information on which pay-per-view events the user has ordered using an interactive program guide or other interactive television application. This type of information may, if desired, be maintained by the program guide. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 148.

In another approach, messages may be used by a program guide or other application based on television service provider settings. The television service provider may enable the user equipment to receive some services, but not others. For example, the user equipment may be enabled to receive a certain lineup of television channels, which is different than the channel lineup of user equipment used by other users. The user equipment may be enabled to access certain interactive applications or have other features that are not available to all users. Messages may be targeted based on such television service provider settings, so that, for example, messages may be not displayed to users not having access to related features. For example, a message may inform the user of last minute schedule changes on a particular television channel, and may be targeted to only those users who have that channel in their channel lineups.

Users who do not have access to the particular channel need not be notified of such changes.

Illustrative steps involved in providing messages to users based on settings from a television service provider are shown in FIG. 14. At step 150, the program guide provider, television service provider, or any other provider may use a message creation tool to automatically or manually generate targeted messages to be delivered to the user. For example, a message presenting a schedule change for channel X may be created for all subscribers who have access to channel X.

At step 152, the message may be distributed to users. For example, the message may be sent to users from a program guide provider at program guide data source 20 via path 30, communications network 24, and path 27, via path 30, communications network 24, path 26, television distribution facility 14, and path 16, or via path 22, television distribution facility 14, and path 16. Messages may be sent to users from a television service provider at television distribution facility 14 via path 16 or via path 26, communications network 24, and path 27.

At step 154, the program guide or other suitable interactive television application or the like may compare the targeting criteria from the message with stored user information by the interactive television application or other application in user equipment 12, server 18, server 28, computer 19, any other suitable device, or a combination thereof. In particular, the targeted message criteria may be compared with stored user information from the

television service provider. This type of information may, if desired, be maintained by the program guide. If the targeted message criteria are satisfied, the message may be displayed on user equipment 12 at step 156.

Thus, systems and methods for distributing and using electronic messages in an interactive television environment are provided. The foregoing is merely illustrative of the principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

What is Claimed is:

1. A method for providing a targeted message to a user that is used to implement an interactive television application, comprising:

creating a message having associated targeting criteria;

distributing the message to a plurality of users;

comparing the targeting criterion to stored user information; and

presenting the message to the user for which the targeting criterion is satisfied.

2. The method defined in claim 1 further comprising distributing the message through a television distribution facility.

3. The method defined in claim 1 further comprising distributing the message through the Internet.

4. The method defined in claim 1 further comprising distributing the message through the Internet and a television distribution facility.

5. The method defined in claim 1 further comprising presenting the message using a set-top box.

6. The method defined in claim 1 further comprising presenting the message using a digital video recorder.

7. The method defined in claim 1 further comprising:

using the interactive television application to set a reminder based upon user input; and

comparing the targeting criterion to stored user information relating to the reminder.

8. The method defined in claim 1 further comprising:

using the interactive television application to subscribe to a service based upon user input; and

comparing the targeting criterion to stored user information relating to the service.

9. The method defined in claim 1 further comprising:

using the interactive television application to set a favorite setting; and

comparing the targeting criterion to stored user information relating to the favorite setting.

10. The method defined in claim 1 further comprising:

using the interactive television application to set a parental control; and

comparing the targeting criterion to stored user information relating to the parental control.

0021-0227.60

11. The method defined in claim 1 further comprising:

using the interactive television application to select content for recording; and

comparing the targeting criterion to stored user information relating to the content.

12. The method defined in claim 1 further comprising:

using the interactive television application to order a product; and

comparing the targeting criterion to stored user information relating to the product.

13. The method defined in claim 1 further comprising:

using the interactive television application to order a service; and

comparing the targeting criterion to stored user information relating to the service.

14. The method defined in claim 1 further comprising comparing the targeting criterion to stored user information that a television service provider has set.

15. The method defined in claim 1 further comprising providing the message from an interactive television application provider.

0021-6240

16. The method defined in claim 1 further comprising providing the message from a television service provider.

17. A system for providing a targeted message to a user that is used to implement an interactive television application, comprising:

a first processor that creates a message having an associated targeting criterion and that causes the message to be distributed to a user;

a second processor that compares the targeting criterion with stored user information and that causes the message to be presented to the user for which the targeting criterion is satisfied.

18. The system defined in claim 17 wherein the first processor is part of a television distribution facility.

19. The system defined in claim 17 wherein the first processor also causes the message to be distributed through the Internet.

20. The system defined in claim 17 wherein the first processor is part of a television distribution facility and causes the message to be distributed through the Internet.

21. The system defined in claim 17 wherein the second processor is part of a set-top box.

22. The system defined in claim 17 wherein the second processor is part of a digital video recorder.

23. The system defined in claim 17 wherein the second processor also sets a reminder based upon user input and compares the targeting criterion to stored user information relating to the reminder.

24. The system defined in claim 17 wherein the second processor also subscribes to a service based upon user input and compares the targeting criterion to stored user information relating to the service.

25. The system defined in claim 17 wherein the second processor also sets a favorites setting based upon user input and compares the targeting criterion to stored user information relating to the favorites setting.

26. The system defined in claim 17 wherein the second processor also sets a parental control based upon user input and compares the targeting criterion to stored user information relating to the parental control.

27. The system defined in claim 17 wherein the second processor also selects content for recording based upon user input and compares the targeting criterion to stored user information relating to the content.

28. The system defined in claim 17 wherein the second processor also orders a product based upon user input and compares the targeting criterion to stored user information relating to the product.

29. The system defined in claim 17 wherein the second processor also orders a service based upon user input and compares the targeting criterion to stored user information relating to the service.

30. The system defined in claim 17 wherein the second processor also compares the targeting criterion to stored user information that a television service provider has set.

31. The system defined in claim 17 wherein the first processor is part of an interactive television application provider.

32. The system defined in claim 17 wherein the first processor is part of a television service provider.

09/772,210

INTERACTIVE TELEVISION TARGETED MESSAGE SYSTEM

Abstract of the Disclosure

An interactive television system is provided in which targeted messages may be sent to users. The interactive television system may use an interactive television program guide or other interactive applications to provide interactive television services to users. An e-mail or other messaging application may be used to receive the messages. The messaging application may be separate from the program guide or other interactive television application or may be part of the program guide or other interactive television application. Messages may be targeted based on the television channels to which the user subscribes or based on which settings the user has established in the program guide or other application or based on any other suitable criteria.

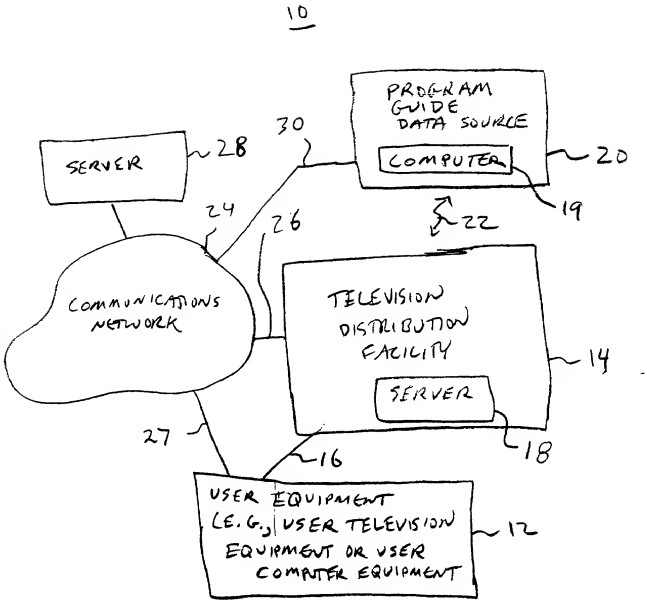

FIG. 1

09717729-112103

Express Mail Label
No. EK709292027US

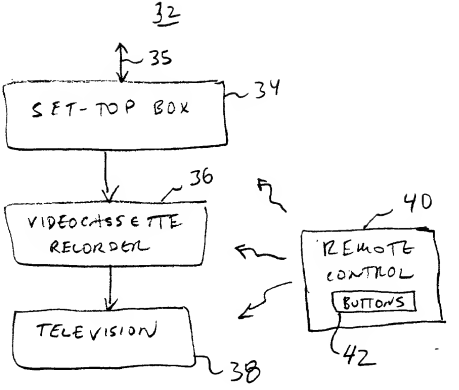

FIG. 2

09717729.112100

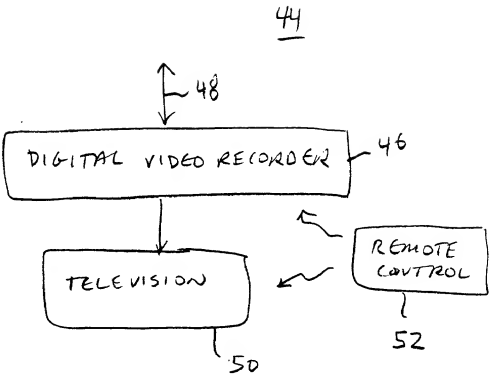
44
48
DIGITAL VIDEO RECORDER
46
TELEVISION
REMOTE CONTROL
50
52

FIG. 3

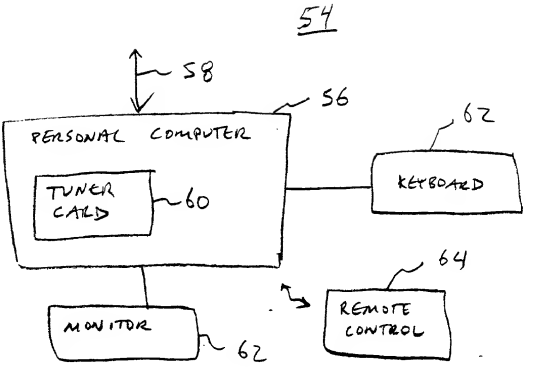

FIG. 4

09717729.121100

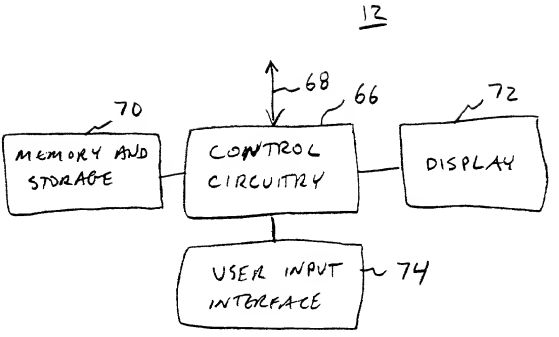

FIG. 5

09217729.112100

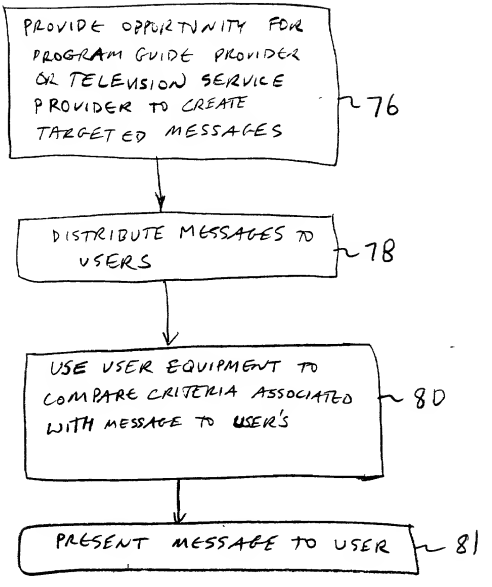
PROVIDE OPPORTUNITY FOR PROGRAM GUIDE PROVIDER OR TELEVISION SERVICE PROVIDER TO CREATE TARGETED MESSAGES
76
DISTRIBUTE MESSAGES TO USERS
78
USE USER EQUIPMENT TO COMPARE CRITERIA ASSOCIATED WITH MESSAGE TO USER'S
80
PRESENT MESSAGE TO USER
81

FIG. 6

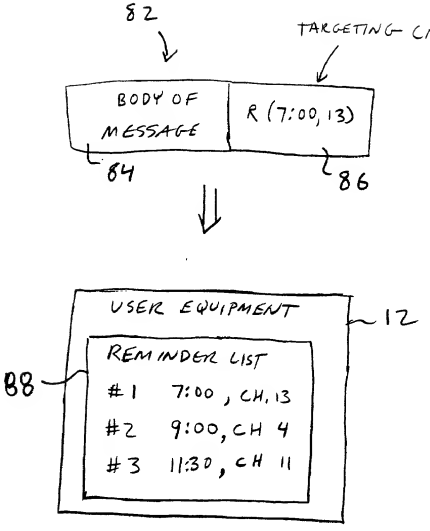
82
TARGETING CRITERIA
BODY OF MESSAGE
R (7:00, 13)
84
86
USER EQUIPMENT
12
REMINDER LIST
88
#1 7:00, CH. 13
#2 9:00, CH 4
#3 11:30, CH 11

FIG. 7

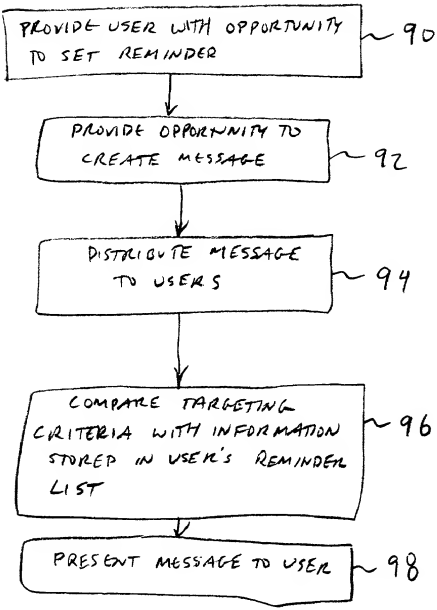
PROVIDE USER WITH OPPORTUNITY TO SET REMINDER
90
PROVIDE OPPORTUNITY TO CREATE MESSAGE
92
DISTRIBUTE MESSAGE TO USERS
94
COMPARE TARGETING CRITERIA WITH INFORMATION STORED IN USER'S REMINDER LIST
96
PRESENT MESSAGE TO USER
98

FIG. 8

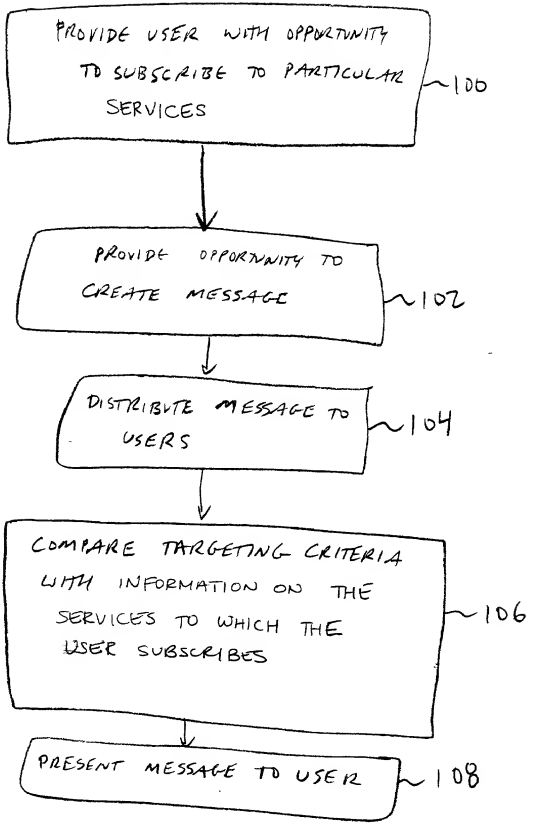
PROVIDE USER WITH OPPORTUNITY TO SUBSCRIBE TO PARTICULAR SERVICES
100
PROVIDE OPPORTUNITY TO CREATE MESSAGE
102
DISTRIBUTE MESSAGE TO USERS
104
COMPARE TARGETING CRITERIA WITH INFORMATION ON THE SERVICES TO WHICH THE USER SUBSCRIBES
106
PRESENT MESSAGE TO USER
108

FIG. 9

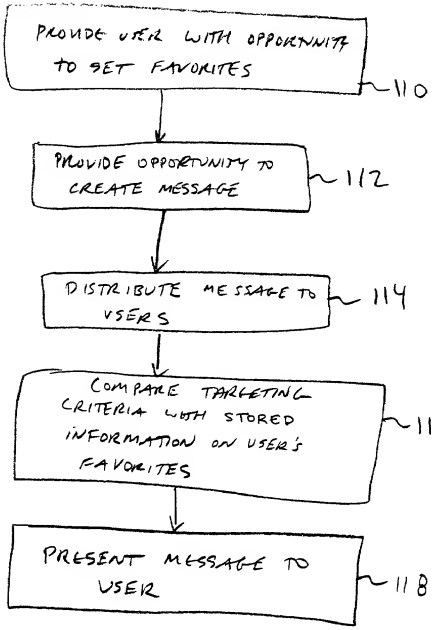
PROVIDE USER WITH OPPORTUNITY TO SET FAVORITES
110
PROVIDE OPPORTUNITY TO CREATE MESSAGE
112
DISTRIBUTE MESSAGE TO USERS
114
COMPARE TARGETING CRITERIA WITH STORED INFORMATION ON USER'S FAVORITES
116
PRESENT MESSAGE TO USER
118

FIG. 10

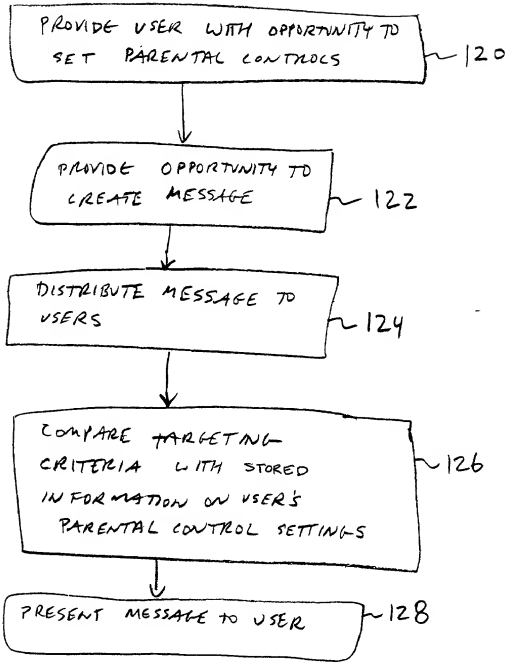
PROVIDE USER WITH OPPORTUNITY TO SET PARENTAL CONTROLS
120
PROVIDE OPPORTUNITY TO CREATE MESSAGE
122
DISTRIBUTE MESSAGE TO USERS
124
COMPARE TARGETING CRITERIA WITH STORED INFORMATION ON USER'S PARENTAL CONTROL SETTINGS
126
PRESENT MESSAGE TO USER
128

FIG. 11

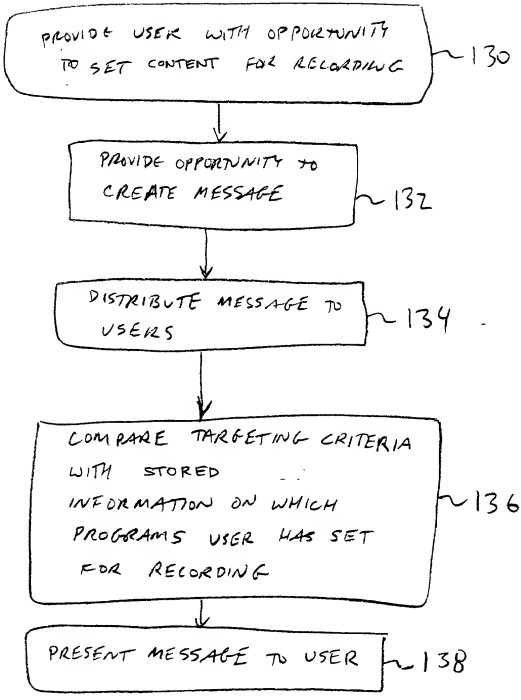
PROVIDE USER WITH OPPORTUNITY TO SET CONTENT FOR RECORDING
130
PROVIDE OPPORTUNITY TO CREATE MESSAGE
132
DISTRIBUTE MESSAGE TO USERS
134
COMPARE TARGETING CRITERIA WITH STORED INFORMATION ON WHICH PROGRAMS USER HAS SET FOR RECORDING
136
PRESENT MESSAGE TO USER
138

FIG. 12

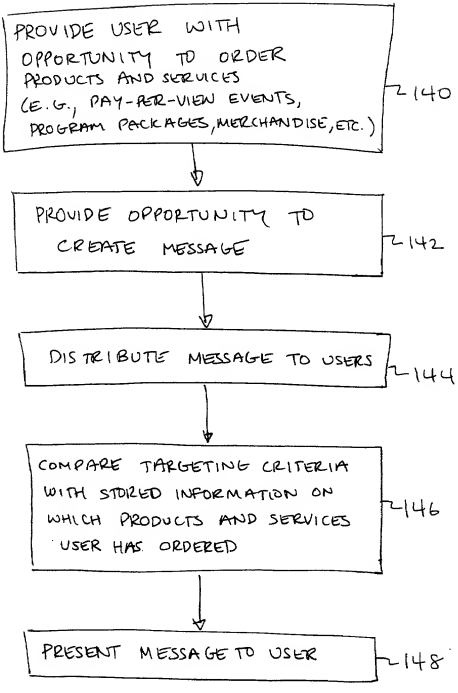
PROVIDE USER WITH OPPORTUNITY TO ORDER PRODUCTS AND SERVICES (E.G., PAY-PER-VIEW EVENTS, PROGRAM PACKAGES, MERCHANDISE, ETC.)
140
PROVIDE OPPORTUNITY TO CREATE MESSAGE
142
DISTRIBUTE MESSAGE TO USERS
144
COMPARE TARGETING CRITERIA WITH STORED INFORMATION ON WHICH PRODUCTS AND SERVICES USER HAS ORDERED
146
PRESENT MESSAGE TO USER
148

FIG. 13

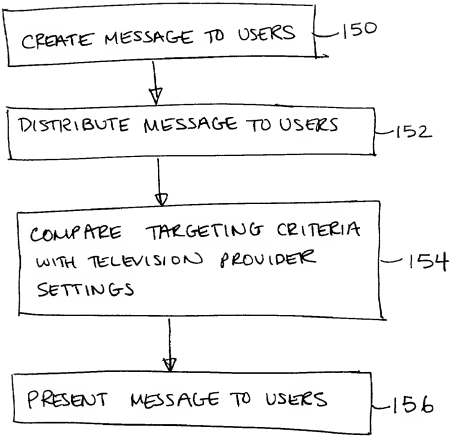
CREATE MESSAGE TO USERS
150
DISTRIBUTE MESSAGE TO USERS
152
COMPARE TARGETING CRITERIA WITH TELEVISION PROVIDER SETTINGS
154
PRESENT MESSAGE TO USERS
156

FIG. 14

DECLARATION AND POWER OF ATTORNEY
FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

INTERACTIVE TELEVISION TARGETED MESSAGE SYSTEM

_____

the specification of which

(check one) [X] is attached hereto

[ ] was filed on _____ as Application Serial No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I do not know and do not believe that the invention was ever patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application.

I do not know and do not believe that the invention was in public use or on sale in the United States of America more than one year prior to this application.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Express Mail Label
No. EK709292027US

Prior Foreign Application(s)

(Number)	(Country)	(Day/Month/Year Filed)	Priority Claimed [ ] Yes [ ] No
(Number)	(Country)	(Day/Month/Year Filed)	[ ] Yes [ ] No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

60/167,184	November 23, 1999
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known by me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

As a named inventor, I hereby appoint the following attorneys or agents to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith:

Margaret A. Pierri, Esq. (Reg. No. 30,709),
Matthew T. Byrne, Esq. (Reg. No. 40,934),
Richard M. Feustel, Jr., Esq. (Reg. No. 46,496),
James A. Leiz, Esq. (Reg. No. 46,109)

09717129 - 112199

Send correspondence to: Matthew T. Byrne
FISH & NEAVE
1251 Avenue of the Americas
New York, New York 10020-1104

Direct telephone calls to: Matthew T. Byrne
(212) 596-9000

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of inventor Michael D. Ellis

Inventor's signature Michael D. Ellis 11/13/00
Date

Residence 1300 Kingwood Place, Boulder, Colorado 80304

Citizenship U.S.A.

Post Office Address 1300 Kingwood Place, Boulder, Colorado 80304

PATENT